HI746 · HI721

Iron Low Range and High Range

Handheld Colorimeters

- Easier to use and more accurate than chemical test kits
- Dedicated to a single parameter
- Small size, big convenience
- Ideal for:
  - Industrial ground and treated waters
  - Mining leachate monitoring
  - Agricultural irrigation water

About 6.3% of the earth's crust is made of iron, of which 43% is in soils. The analysis of iron is often performed to monitor ground water and irrigation waters as a gauge of corrosion from industrial settling, and as an indication of the effectiveness of treatment from mining leachate.

The Hanna HI746 and HI721 Checker®HC bridge the gap between simple chemical test kits and professional instrumentation. Chemical test kits are not very accurate and only give 5 to 10 points resolution, while professional instrumentation can cost hundreds of dollars and can be time-consuming to calibrate and maintain. these meters are accurate, affordable and produce immediate results.

The HI721 features a resolution of 0.01 ppm and ±0.04 ppm ±2% of reading accuracy while the HI746 features 1 ppb resolution and ±20 ppb ±5% of reading accuracy.

The contoured style of these meters fit in your palm and pocket perfectly and the large LCD is easy to read. The auto shut-off feature assures battery life will not be drained if you forget to turn it off.

Specifications	HI746 (LR)	HI721 (HR)
Range	0 to 999 ppb	0.00 to 5.00 ppm
Resolution	1 ppb	0.01 ppm
Accuracy @25°C (77°F)	±20 ppb ±5% of reading	±0.04 ppm ±2% of reading
Light Source	LED @ 575 nm	LED @ 525 nm
Light Detector	silicon photocell	
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing	
Battery Type	(1) 1.5V AAA	
Auto-off	after ten minutes of non-use	after three minutes of non-use and two minutes after reading
Dimensions	86.0 x 61.0 x 37.5 mm (3.4 x 2.4 x 1.5")	
Weight	64 g (2.3 oz)	
Method	adaptation of the TPTZ method	Adaptation of Standard Method 3500-Fe B, Phenanthroline Method
Ordering Information	**HI746** Checker®HC is supplied with sample cuvettes with caps (2), iron LR reagent starter kit (reagents for 25 tests), 25 mL glass cylinders with rubber cap (2), battery, instructions and quick start guide. **HI721** Checker®HC is supplied with sample cuvettes with caps (2), iron HR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.	
Reagent Set	**HI746-25** (25 tests)	**HI721-25** (25 tests)
Calibration Set	**HI746-11**	**HI721-11**

See page 10.140 for Checker HC accessories

Checker®HC Reagents and Calibration Check Sets

Meter Code	Parameter	Chemical Method	Reagent Code	Calibration Checking Set	# of Tests
HI700	Ammonia LR	Nessler*	**HI700-25**	**HI700-11**	25
HI701	Chlorine, Free	DPD*	**HI701-25**	**HI701-11**	25
HI702	Copper HR	Bicinchoninate*	**HI702-25**	**HI702-11**	25
HI705	Silica LR	Heteropoly Blue*	**HI705-25**	**HI705-11**	25
HI706	Phosphorus HR	Amino Acid*	**HI706-25**	**HI706-11**	40
HI707	Nitrite LR	Diazotization*	**HI707-25**	**HI707-11**	25
HI708	Nitrite HR	Ferrous Sulfate*	**HI708-25**	**HI708-11**	25
HI709	Manganese HR	Periodate*	**HI709-25**	**HI709-11**	25
HI711	Chlorine, Total	DPD*	**HI711-25**	**HI711-11**	25
HI713	Phosphate LR	Ascorbic Acid*	**HI713-25**	**HI713-11**	25
HI715	Ammonia MR	Nessler*	**HI715-25**	**HI715-11**	25
HI716	Bromine	DPD*	**HI716-25**	**HI716-11**	25
HI717	Phosphate HR	Amino Acid*	**HI717-25**	**HI717-11**	40
HI718	Iodine	DPD*	**HI718-25**	**HI718-11**	25
HI719	Magnesium Hardness	EDTA*	**HI719-25**	**HI719-11**	25
HI720	Calcium Hardness	Calmagite*	**HI720-25**	**HI720-11**	25
HI721	Iron HR	Phenantroline*	**HI721-25**	**HI721-11**	25
HI723	Chromium VI HR	Diphenylcarbohydrazide*	**HI723-25**	**HI723-11**	25
HI726	Nickel HR	Photometric*	**HI726-25**	**HI726-11**	25
HI727	Color of Water	Colorimetric Platinum Cobalt*	**–**	**HI727-11**	–
HI729	Fluoride LR	SPADNS*	**HI729-26**	**HI729-11**	20
HI733	Ammonia HR	Nessler*	**HI733-25**	**HI733-11**	20
HI736	Phosphorus, Marine ULR	Ascorbic Acid*	**HI736-25**	**HI736-11**	25
HI739	Fluoride HR	SPADNS*	**HI739-26**	**HI739-11**	30
HI746	Iron LR	TPTZ*	**HI746-25**	**HI746-11**	25
HI747	Copper LR	Bicinchoninate*	**HI747-25**	**HI747-11**	25
HI749	Chromium LR	Diphenylcarbohydrazide*	**HI749-25**	**HI749-11**	25
HI753	Chloride	Mercury(II) Thiocyanate	**HI753-25**	**HI753-11**	25
HI755	Alkalinity, Marine	Colorimetric	**HI755-26**	**HI755-11**	25
HI758	Calcium, Marine	Zincon*	**HI758-26**	**HI758-11**	25
HI761	Chlorine, Total ULR	DPD*	**HI761-25**	**HI761-11**	25
HI762	Chlorine, Free ULR	DPD*	**HI762-25**	**HI762-11**	25
HI764	Nitrite, Marine ULR	Diazotization*	**HI764-25**	**HI764-11**	25
HI767	Nitrite, Marine LR	Diazotization*	**HI767-25**	**HI767-11**	25
HI770	Silica HR	USEPA 370.1*/Std. Mtd. 4500-SiO_2C*	**HI770-25**	**HI770-11**	25
HI771	Chlorine, Total UHR	4500-Cl*	**HI771-25**	**HI771-11**	25
HI772	Alkalinity, Marine	Colorimetric	**HI772-26**	**HI772-11**	25
HI774	Phosphate, Marine ULR	Ascorbic Acid*	**HI774-26**	**HI774-11**	25
HI775	Alkalinity	Colorimetric	**HI775-26**	**HI775-11**	25

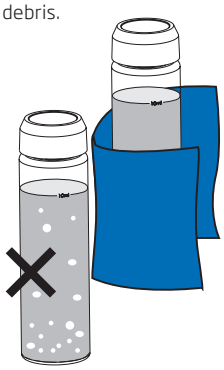
*adaptation

Checker HC Accessories

Code	Description
HI731318	cuvette cleaning cloth (4)
HI731315	glass cuvettes and caps (2)
HI731321	glass cuvettes (4)
HI731225	cuvette cap for Checker®HC (4)
HI93703-50	cuvette cleaning solution
HI740226	5 mL graduated syringe
HI740157P	plastic refilling pipette (20)
HI740144P	pipette tip (6)
HI740143	1 mL graduated syringe (6)
HI740036P	100 mL plastic beaker (10)
HI70436M	deionized water (230 mL)
HI70436	deionized water (1G)

Tips for an accurate measurement

It is important that the sample does not contain any debris.



Whenever the cuvette is placed into the measurement cell, it must be dry outside and completely free of fingerprints, oil or dirt. Wipe it thoroughly with HI731318 or a lint-free cloth prior to insertion.

Shaking the cuvette can generate bubbles, causing higher readings. To obtain accurate measurements, remove such bubbles by swirling or by gently tapping the cuvette.

Do not let the reacted sample stand for too long after reagent is added, or accuracy will be lost.

After the reading, it is important to discard the sample immediately, otherwise the glass might become permanently stained.